Slimhole DST String

Downhole reservoir testing in small-casing wells

OD:
3.125 in

Differential pressure:
15,000 psi [103.4 MPa]

Temperature:
375 degF [190 degC]

Certification:
NACE MR0175 compliant

Where it is used

- Downhole reservoir testing
- Deviated and deepwater wells
- Exploration and appraisal testing
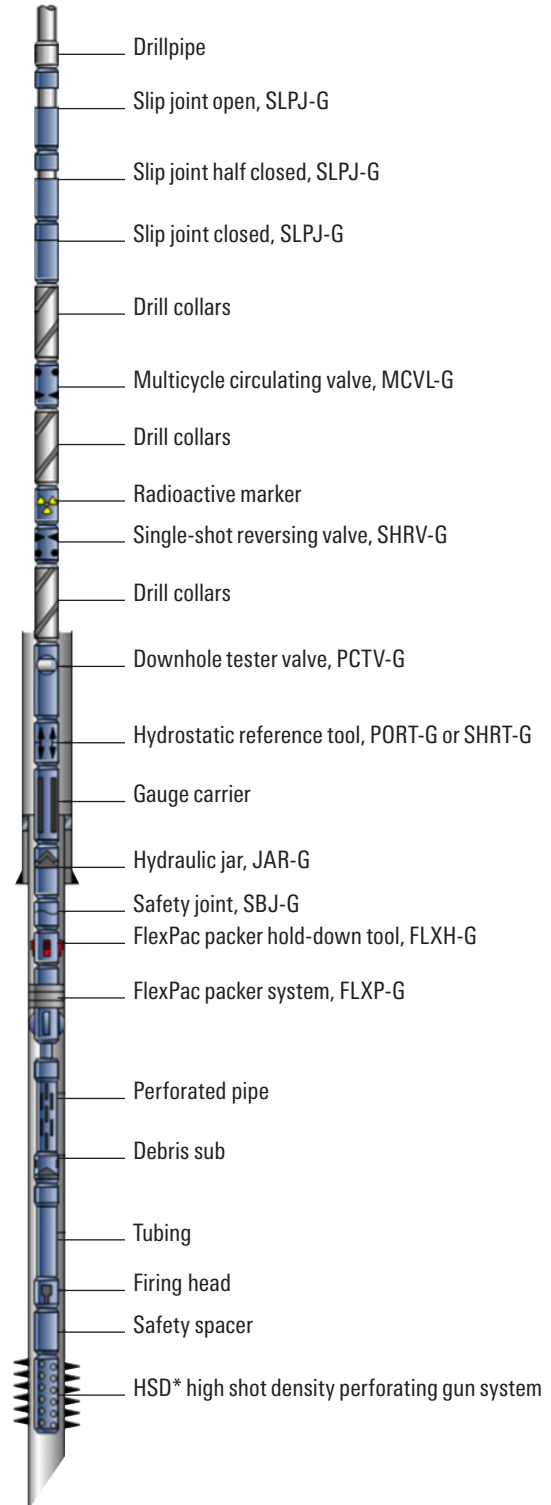- Completion operations

How it improves wells

The slimhole drillstem testing (DST) string is designed for holes down to 4½-in casing, enabling you to conduct well testing and gather data in small casing sizes that were previously untestable. The 15,000-psi, 375-degF HPHT testing string has similar features to the standard PCT* pressure-controlled tester valve string and provides high operational flexibility and capability using 3⅛-in × 1⅛-in slim-diameter tools.

How it works

The multicycle circulating valve with lock (MCVL) is reclosable. In addition to reversing out to kill the well at the end of the test, it can be used to spot treat fluids and change out the cushion if necessary. The MCVL is tubing-pressure operated and provides system redundancy, as a single-shot reversing valve (SHRV) is run as a secondary reversing valve and is annulus-pressure operated.

The retrievable FlexPac* high-performance service packer with hold-down tool provides a rugged and reliable seal above the producing zone and string support and prevents pumping the string uphole because of hydraulic forces. Two or more slip joints (SLPJs) are run, as needed, to compensate for any string movement between the two fixed points at the packer and surface resulting from temperature changes during the job.

Schlumberger engineers customize the string design for optimal deployment to ensure that the necessary data is collected and risks are mitigated.

Slimhole DST String Specifications	
OD, in [mm]†	3.125 [79.37]
ID, in [mm]	1.125 [28.57]
Pressure rating	
Max. differential across wall, psi [MPa]	15,000 [103]
Max. differential across ball (static), psi [MPa]	15,000 [103]
Max. differential across ball while opening from below, psi [MPa]	7,500 [51]
Max. differential across flapper, psi [MPa]	15,000 [103]
Max. annular, psi [MPa]	20,000 [137]
Max. tubing, psi [MPa]	20,000 [137]
Max. differential across packer elements, psi [MPa]	12,000 [82]
Temperature rating, degF [degC]	375 [190]
NACE MR0175 compliance	H_2S, acid
Tensile strength at min. yield, lbf [kN]	151,600 [675]‡
Connection	2⅜-in regular or PH6

† Excluding packer
‡ 160,000 lbf [711 kN] if SLPJs are not required

Drillpipe
Slip joint open, SLPJ-G
Slip joint half closed, SLPJ-G
Slip joint closed, SLPJ-G
Drill collars
Multicycle circulating valve, MCVL-G
Drill collars
Radioactive marker
Single-shot reversing valve, SHRV-G
Drill collars
Downhole tester valve, PCTV-G
Hydrostatic reference tool, PORT-G or SHRT-G
Gauge carrier
Hydraulic jar, JAR-G
Safety joint, SBJ-G
FlexPac packer hold-down tool, FLXH-G
FlexPac packer system, FLXP-G
Perforated pipe
Debris sub
Tubing
Firing head
Safety spacer
HSD* high shot density perforating gun system

Slimhole DST string.

slb.com/reservoirtesting